

**CLAIMS**

- 5 1. A method of assaying for peptide-specific T-cells, which method comprises providing a fluid containing T-cells, adding a peptide to the fluid, incubating the fluid to cause cytokine release, and detecting the released cytokine.
2. A method as claimed in claim 1, which method comprises  
10 providing the fluid containing T-cells in contact with a surface carrying an immobilised first antibody to the cytokine, adding the peptide to the fluid, incubating the resulting fluid mixture under conditions to cause any peptide-specific T-cells that have been pre-sensitised to the peptide to secrete the cytokine, and detecting any secreted cytokine bound to the  
15 immobilised first antibody.
3. A method as claimed in claim 1 or claim 2, wherein the T-cells are peripheral blood mononuclear cells.
4. A method as claimed in any one of claims 1 to 3, wherein the peptide-specific T-cells are CD8+ or CD4+ cells and the cytokine is IFN- $\gamma$ .
- 20 5. A method as claimed in any one of claims 1 to 4, wherein the peptide is 7 - 15 amino acid residues in length.
6. A method as claimed in any one of claims 1 to 5, wherein the resulting fluid mixture is incubated under non-sterile conditions.
7. A method as claimed in any one of claims 1 to 6, wherein the  
25 peptide is a known epitope.
8. A method as claimed in any one of claims 1 to 7, wherein the T-cells are taken from a patient known to be suffering, or to have suffered from, infection with an intracellular pathogen.
9. A method as claimed in any one of claims 1 to 8, performed  
30 to monitor progress of HIV infection.

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10. A method as claimed in any one of claims 1 to 8, performed to monitor the effect of a vaccine.

11. A method as claimed in any one of claims 1 to 8, performed to determine a pathogen-derived epitope targeted by CD4+ or CD8+

5 T cells.

12. A method as claimed in any one of claims 1 to 11, applied to the study of Hepatitis B, Hepatitis C, tuberculosis, malaria, HIV or influenza.